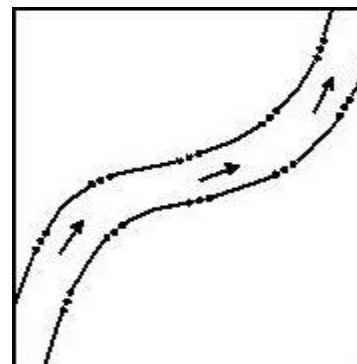


EC-4 DIVERSION CHANNELS/DITCHES

Refer to: ITD Standards and Specifications for Highway Construction, Section 212.
ITD Standard Drawing P-1-D.



Standard Symbol

Definition and Purpose

Diversion channels or ditches are small excavations for diverting overland flow away from exposed slopes, conveying the water to where it can be safely discharged through a stabilized outlet or to a sediment basin.

Appropriate Applications

- Diversion channels or ditches are used above the top of slopes, at the toe of slopes or embankments, in material sources, and at waste sites to collect and divert runoff.
- Temporary diversion channels or ditches can be used on the lower side of cleared areas that are awaiting excavation. They can also be used along benches on large slope faces to prevent collected runoff from flowing onto slope faces downslope and to reduce the length of an uninterrupted slope face on un-benched slopes.
- A diversion channel or ditch may be used in conjunction with a berm or dike. Flows concentrated by a diversion channel or ditch and dike or berm should be discharged using chutes, flumes, or slope drains.

BMP Objectives

- | | |
|-------------------------------------|-----------------------|
| <input checked="" type="checkbox"/> | Perimeter Control |
| <input checked="" type="checkbox"/> | Slope Protection |
| <input type="checkbox"/> | Borrow and Stockpiles |
| <input checked="" type="checkbox"/> | Drainage Areas |
| <input type="checkbox"/> | Sediment Trapping |
| <input type="checkbox"/> | Stream Protection |
| <input type="checkbox"/> | Temporary Stabilizing |
| <input type="checkbox"/> | Permanent Stabilizing |

Limitations

- Mechanical stabilization may be required for temporary channels or ditches with a gradient in excess of 50 percent (channel or ditch slope steeper than 2H:1V) and for large flows or highly erodible soils.
- Conditions of an NPDES permit and/or a 404 permit may apply.

Design Parameters

- The diversion outlet may be discharged to a non-wetland (preferably vegetated) area, sediment basin, an artificially stabilized area, or to a slope drain, chute, or flume. The diverted runoff should not be allowed to overtop the dike or lip of the ditch. Discharge should be to a flat or gently sloping area.
- Side slopes of the channel or ditch should be 2H:1V or flatter, and the grade should be gradual.
- The diversion channel or ditch may consist of a trench and a dike or berm. If a berm or dike is used, it should be compacted as specified.
- Diversion channels/ditches may be constructed with or without a supporting berm or dike on the downslope side.
- Other sediment-control measures, such as sediment basins, ditch checks, etc., may be required to filter or trap sediment before the runoff leaves the site.
- Field adjustments shall be made as necessary to ensure proper performance.

Maintenance and Inspection

- Conduct inspections as required by the NPDES permit or contract specifications.
- Repair damaged areas immediately, and remove obstructions.
- Remove the channel or ditch, if required. The area feeding runoff to the channel or ditch shall be permanently stabilized before the channel or ditch is removed.